

WHAT IS CLAIMED IS:

1. A method of storing a material into which a gas saturates, before the material is foamed in a metal foam, while maintaining a gas saturated state,

5 wherein the material into which the gas saturates is stored at a predetermined ambient pressure and predetermined ambient temperature, thereby preventing escape of the gas from the material into which the gas saturates.

10 2. The method according to claim 1, wherein the predetermined ambient pressure is 0.5 to 4 MPa.

3. The method according to claim 1, wherein the predetermined ambient temperature is  $-5^{\circ}\text{C}$  to  $20^{\circ}\text{C}$ .

4. A method of storing a material into which a gas  
15 saturates, wherein a gas is allowed to saturate into a resin material at a saturation pressure  $P$  (MPa) of not less than 4 (MPa) and a temperature  $T$  ( $^{\circ}\text{C}$ ), and, letting  $m$  ( $-0.05 < m < 0.2$ ) be a coefficient determined by a material type and a gas saturation time, the  
20 material is stored in an ambient defined by a pressure  $p$  (MPa) represented by

$$p = P(0.02P + m)$$

and a temperature  $t$  represented by

$$0.1875T - 10 < t < 0.5T - 10$$

25 where  $20^{\circ}\text{C} \leq T \leq 60^{\circ}\text{C}$

and represented by

$$0.1875T - 10 < t \leq 20^{\circ}\text{C}$$

where  $T > 60^{\circ}\text{C}$ .

5. The method according to claim 4, wherein the material is a resin material.

6. The method according to claim 4, wherein the  
5 material is a rubber material.

7. The method according to claim 1, wherein the material is a pelletized solid.

8. The method according to claim 1, wherein the gas is an inert gas.

10 9. The method according to claim 8, wherein the inert gas is carbon dioxide.

10. The method according to claim 1, wherein a gas saturation amount after storage is 0.1 to 0.4 wt%.

11. A method of storing a material into which a gas  
15 saturates, wherein 0.1 to 1.5 wt% of supercritical carbon dioxide are allowed to saturate into a pelletized solid resin material, and the solid resin material is stored at a temperature lower than a gas temperature when the carbon dioxide saturates, and at a  
20 high gas density.

12. A method of storing a material into which a gas saturates, wherein 0.1 to 1.5 wt% of supercritical carbon dioxide at a gas density of  $0.08$  to  $0.2 \text{ g/cm}^2$  are allowed to saturate into a pelletized solid resin  
25 material, and the solid resin material is stored at a gas density of  $0.7$  to  $1.0 \text{ g/cm}^2$ .